ABSTRACT OF THE DISCLOSURE

Provided is a wireless data transmitting/receiving apparatus and method using an UltraWide Band (UWB). The apparatus includes a random number generator; a random-interval pulse sequence generator; a template pulse sequence generator which generates a reference template pulse sequence used to detect the start point of the random-interval pulse sequence and generates pulse sequences for a signal 0 and a signal 1 by changing the widths of pulses; a random number sequence detector which receives the random-interval pulse sequence and detects information regarding the start point of a random number sequence, using the reference template pulse sequence; and a comparator which compares the pulse sequences for the signal 0 and the signal 1, and determines whether the value of the received random-interval pulse sequence is 0 or 1. Accordingly, it is possible to easily detect information regarding the start point of a pulse sequence while maintaining a processing gain.